

This listing of claims will replace the originally filed claims in the application.

Listing of Claims

Claims 1-14 (canceled)

Claim 15 (new): An air distillation apparatus that comprises at least two cold boxes and further comprises:

- i) at least one heat exchanger comprising the means for cooling the air to be distilled;
- ii) at least one air distillation unit comprising the means to produce at least one component selected from the group consisting of: oxygen, nitrogen, and argon;
- iii) an air treatment unit comprising the means to treat and feed the air distillation unit(s); and
- iv) a common header connected to the inlets and/or outlets of the equipment components mounted in parallel and networked comprising the means to collect and/or redistribute all of the air,

wherein said air distillation apparatus comprises the means to produce at least one component selected from the group consisting of: oxygen, nitrogen, and argon.

Claim 16 (new): The apparatus according to Claim 15, wherein said air treatment unit comprises the means to receive and treat fluid coming from said air distillation unit(s); and

wherein the equipment components of said fluid treatment are mounted in parallel and networked further comprising at least one component selected from the group consisting of: turbine, pump, heater, and cooling tower.

Claim 17 (new): The apparatus according to Claim 15, wherein said air treatment unit comprises several equipment components mounted in parallel and networked further comprising:

- i) at least one atmospheric air compressor; and/or
- ii) at least one air precooler; and/or
- iii) at least one adsorber; and/or
- iv) at least one expansion turbine; and/or
- v) at least one booster.

Claim 18 (new): The apparatus according to Claim 17, wherein said atmospheric air compressor is mounted in parallel with outlets connected to a common header;

wherein said air precooler is mounted in parallel with inlets and outlets connected to a common header; and

wherein said adsorber and said expansion turbine are mounted in parallel with inlets and outlets connected to a common header and, respectively;

wherein the total number of units of at least one said atmospheric air compressor, or optionally said air precooler, or optionally said adsorber differs from the total number of cold boxes in the apparatus.

Claim 19 (new): The apparatus according to Claim 18, wherein said precooler comprises:

- i) at least 2 units; and
- ii) at least one common coolant production device.

Claim 20 (new): The apparatus according to Claim 19, wherein said device is a water/nitrogen cooling tower that further comprises:

- i) an inlet header connected to a waste nitrogen outlet of the cold box; and
- ii) an outlet header.

Claim 21 (new): The apparatus according to Claim 17, wherein said adsorber comprises at least one common heater for an adsorbent regeneration gas.

Claim 22 (new): The apparatus according to Claim 21, wherein said common heater comprises:

- i) an inlet header connected to a waste nitrogen outlet of the cold box; and
- ii) an outlet header.

Claim 23 (new): The apparatus according to Claim 15, wherein said air treatment unit further comprises air boosters mounted in parallel with inlets and outlets connected to common headers.

Claim 24 (new): The apparatus according to Claim 23, wherein the total number of said air boosters differs from the total number of cold boxes.

Claim 25 (new): The apparatus according to Claim 23, wherein the total number of main air compressor(s) equals the total number of air boosters; and
thereby said compressor and said booster pairs each share a common drive member.

Claim 26 (new): The apparatus according to Claim 15, wherein each said cold box comprises means to produce at least one component selected from the group consisting of: liquid oxygen, liquid nitrogen and liquid argon.

Claim 27 (new): The apparatus according to Claim 26, wherein said apparatus further comprises at least one pump mounted in parallel between an inlet header connected to the air distillation unit; and
wherein a common outlet header is connected to the heat exchanger.

Claim 28 (new): The apparatus according to Claim 27, wherein the total number of said pumps differs from the total number of cold boxes.

Claim 29 (new): The apparatus according to Claim 15, wherein said air treatment unit further comprises turbines mounted in parallel between a common inlet header and a common outlet header.

Claim 30 (new): The apparatus according to Claim 29, wherein the total number of said turbines differs from the total number of cold boxes.

Claim 31 (new): The apparatus according to Claim 17, wherein at least one said equipment component in parallel and networked contains at least one more additional unit than the total number of cold boxes; and
wherein each said equipment has the means to feed at least one air distillation unit.

Claim 32 (new): The apparatus according to Claim 16, wherein at least one equipment component in parallel consists of means to treat fluid for at least one air distillation unit.

Claim 33 (new): The apparatus according to 17, wherein the total number of said equipment components in parallel and networked contains at least two more additional units than the total number of said cold boxes; and

wherein each said equipment comprises a lesser capacity to feed the air or to treat the fluid of the air distillation unit.

Claim 34 (new): The apparatus according to 17, wherein the total number of said equipment components in parallel and networked contains at least two fewer additional units than the total number of said cold boxes; and

wherein each said equipment comprises a greater capacity to feed the air or to treat the fluid of the air distillation unit.

Claim 35 (new): A method for producing at least one component selected from the group consisting of: oxygen, nitrogen, and argon by utilizing an air distillation apparatus that contains at least two cold boxes and an treatment unit, comprising the steps of:

- i) cooling the air to be distilled by utilizing at least one heat exchanger;
- ii) producing at least one component selected from the group consisting of: oxygen, nitrogen, and argon by utilizing at least one air distillation unit;
- iii) treating and feeding the air distillation unit(s) by utilizing an air treatment unit; and
- iv) collecting and/or redistributing all of the air by utilizing a common header connected to the inlets and/or outlets of the equipment components mounted in parallel and networked.

Claim 36 (new): The method according to Claim 35, wherein said method further comprises treating and feeding the air distillation unit(s) via an air treatment unit; and

wherein said air treatment unit comprises equipment components mounted in parallel and networked with their inlets and/or their outlets connected to a common header collecting or redistributing all of the air.

Claim 37 (new): The method according to Claim 36, wherein said method further comprises receiving and treating fluid coming from said air distillation unit(s),

wherein the equipment components of said fluid treatment are mounted in parallel and networked further comprising at least one component selected from the group consisting of: turbine, pump, heater, and cooling tower.

Claim 38 (new): The method according to Claim 35, wherein said method further comprises regenerating an adsorbent gas by utilizing at least one common heater.

Claim 39 (new): The method according to Claim 35, wherein said method comprises feeding at least one air distillation unit by utilizing equipment components in parallel and networked containing at least one more additional unit than the total number of said cold boxes.

Claim 40 (new): The method according to Claim 39, wherein said method further

comprises treating fluid for at least one air distillation unit by utilizing at least one equipment in parallel.

Claim 41 (new): The method according to Claim 40, wherein said method comprises a lesser capacity to feed the air or to treat the fluid of the air distillation unit by utilizing said equipment; and

wherein the total number of said equipment components in parallel and networked contains at least two more additional units than the total number of cold boxes.

Claim 42 (new): The method according to Claim 40, wherein said method comprises a greater capacity to feed the air or to treat the fluid of the air distillation unit by utilizing said equipment; and

wherein the total number of said equipment components in parallel and networked contains at least two fewer additional units than the total number of cold boxes.

Claim 43 (new): An apparatus comprising a common header which comprises the means to collect or redistribute all of the air or fluid from a corresponding air treatment step or a fluid treatment step; and

wherein air treatment means or the fluid treatment means comprise equipment components mounted in parallel and networked with inlets and/or outlets connected to said common header.

Claim 44 (new): The apparatus according to Claim 43, wherein an atmospheric air compressor is mounted in parallel with outlets connected to an additional common header;

wherein an air precooler, is mounted in parallel with inlets and outlets connected to an additional common header; and

wherein an adsorber and an expansion turbine are mounted in parallel with inlets and outlets connected to an additional common header.

Claim 45 (new): The apparatus according to Claim 43, wherein a water/nitrogen cooling tower comprises:

- iii) an additional inlet header connected to a waste nitrogen outlet of the cold box; and
- iv) an additional outlet header.

Claim 46 (new): The apparatus according to Claim 43, wherein said air treatment unit further comprises air boosters mounted in parallel with inlets and outlets connected to common headers.

Claim 47 (new): The apparatus according to Claim 43, wherein at least one pump is mounted in parallel between an additional inlet header connected to the air distillation unit; and

wherein an additional common outlet header is connected to the heat exchanger.